In the Claims:

Please cancel claim 1.

Please add new claims 33-70 as follows:

33. (New) A method comprising:

moving a fluid in a first rotational flow pattern;

providing a collider chamber;

allowing some of the fluid flowing in the first rotational flow pattern to flow into the collider chamber and form a secondary rotational flow pattern in the chamber, a radius of the first rotational flow pattern being larger than a radius of the secondary rotational flow pattern, the difference between the radii of the first and secondary flow patterns causing a rotational velocity of the secondary rotational flow pattern to be larger than a rotational velocity of the first rotational flow pattern, the secondary rotational flow pattern rotating sufficiently fast to generate heat and vaporize at least some of the fluid in the secondary rotational flow pattern.

34. (New) A method according to claim 33, wherein the vaporized fluid in the secondary rotational flow pattern collects near the center of the secondary rotational flow pattern in a vapor region.

35. (New) A method according to claim 34, wherein the vapor region is generally cyclone shaped.

36. (New) A method according to claim 33, further comprising providing a fluid inlet coupled to the collider chamber, the fluid inlet selectively permitting fluid to flow into the collider chamber in a direction that is non-parallel to an axis of rotation of the secondary rotational flow pattern.

37. (New) A method according to claim 33, further comprising providing a fluid outlet coupled to the collider chamber, the fluid outlet selectively permitting fluid to flow out of the collider chamber in a direction that is non-parallel to an axis of rotation of the secondary rotational flow pattern.

38. (New) A method comprising:

providing a body having an interior surface, the interior surface defining a plurality of collider chambers;

providing a drum within the body, the drum having an exterior surface;

introducing fluid between the exterior surface of the drum and the interior surface of the body;

rotating the drum and thereby generating a rotational fluid flow pattern in each of the collider chambers, all of the rotational fluid flow patterns rotating in a direction opposite to the rotation of the drum.

39. (New) A method according to claim 38, further comprising providing a plurality of fluid inlets, each of the fluid inlets being coupled to a corresponding one of the collider chambers, each of the fluid inlets selectively permitting fluid to flow into its corresponding collider chamber, the fluid inlets being oriented in a direction non-parallel to an axis of rotation of the drum.

40. (New) A method according to claim 38, further comprising providing a plurality of fluid outlets, each of the fluid outlets being coupled to a corresponding one of the collider chambers, each of the fluid outlets selectively permitting fluid to flow out of its corresponding collider chamber, the fluid outlets being oriented in a direction non-parallel to an axis of rotation of the drum.

41. (New) A method according to claim 38, further comprising rotating the drum sufficiently fast to generate heat.

42. (New) A method according to claim 38, further comprising rotating the drum sufficiently fast to generate heat and vaporize at least some of the fluid flowing in the rotational fluid flow patterns.

43. (New) A method according to claim 42, further comprising removing at least some of the vaporized fluid from the rotational fluid flow patterns.

44. (New) A method according to claim 43, further comprising condensing at least some of the vaporized fluid.

45. (New) A method according to claim 38, wherein each rotation of the drum adds kinetic energy to fluid in the rotational fluid flow patterns.

46. (New) A method according to claim 38, further comprising rotating the drum sufficiently fast to create a vacuum within at least a portion of the plurality of collider chambers.

47. (New) A method according to claim 38, further comprising rotating the drum sufficiently fast so that at least a portion of the fluid within the plurality of collider chambers compresses.

48. (New) A method according to claim 38, wherein the fluid contains an agent and wherein rotating the drum causes the agent to separate from the fluid.

49. (New) A method according to claim 48, wherein the agent is at least one of the following: a solid, a liquid and a gas.

50. (New) A method according to claim 38, wherein at least a portion of the fluid contains an agent and wherein rotating the drum causes the agent to further mix with the fluid.

51. (New) A method according to claim 38, wherein the fluid contains reactants and wherein the rotation of the drum causes a reaction rate to increase.

52. (New) A method according to claim 38, wherein the rotation of the drum causes the fluid to undergo a chemical reaction.

53. (New) A method according to claim 38, wherein the drum includes a first portion and a second portion, an outer diameter of the first portion being smaller than an outer diameter of the second portion.

54. (New) A method according to claim 53, further comprising providing a fluid inlet and a fluid outlet, the fluid inlet being coupled to one of the collider chambers proximal the first portion of the drum, the fluid outlet being coupled to the one collider chamber proximal the second portion of the drum.

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55. (New) A method according to claim 54, wherein rotation of the drum generates a suction force in the fluid inlet.

56. (New) A method according to claim 54, wherein rotation of the drum tends to force fluid into the outlet.

57. (New) A method comprising:

providing a body having an interior surface, the interior surface defining a plurality of collider chambers;

providing a rotor within the body, the rotor having an exterior surface;

introducing fluid between the exterior surface of the rotor and the interior surface of the body;

rotating the rotor and thereby generating a rotational fluid flow pattern in each of the collider chambers, all of the rotational fluid flow patterns rotating in a direction opposite to the rotation of the rotor.

58. (New) A method according to claim 57, further comprising providing a plurality of fluid inlets, each of the fluid inlets being coupled to a corresponding one of the collider chambers, each of the fluid inlets selectively permitting fluid to flow into its corresponding collider chamber, the fluid inlets being oriented in a direction non-parallel to an axis of rotation of the rotor.

59. (New) A method according to claim 57, further comprising providing a plurality of fluid outlets, each of the fluid outlets being coupled to a corresponding one of the collider chambers, each of the fluid outlets selectively permitting fluid to flow out of its corresponding collider chamber, the fluid outlets being oriented in a direction non-parallel to an axis of rotation of the rotor.

60. (New) A method according to claim 57, further comprising rotating the rotor sufficiently fast to generate heat.

61. (New) A method according to claim 57, further comprising rotating the rotor sufficiently fast to generate heat and vaporize at least some of the fluid flowing in the rotational fluid flow patterns.

62. (New) A method according to claim 61, further comprising removing at least some of the vaporized fluid from the rotational fluid flow patterns.

63. (New) A method according to claim 62, further comprising condensing at least some of the vaporized fluid.

64. (New) A method according to claim 57, wherein each rotation of the rotor adds kinetic energy to fluid in the rotational fluid flow patterns.

65. (New) A method according to claim 57, wherein the rotor includes a first portion and a second portion, an outer diameter of the first portion being smaller than an outer diameter of the second portion.

66. (New) A method according to claim 65, further comprising providing a fluid inlet and a fluid outlet, the fluid inlet being coupled to one of the collider chambers proximal the first portion of the rotor, the fluid outlet being coupled to the one collider chamber proximal the second portion of the rotor.

67. (New) A method according to claim 66, wherein rotation of the rotor generates a suction force in the fluid inlet.

68. (New) A method according to claim 66, wherein rotation of the rotor tends to force fluid into the outlet.

69. (New) A method for heating a fluid, the method comprising:

providing a stator having an inner wall, the inner wall defining a plurality of collider chambers;

providing a rotor disposed for rotation about an axis, an outer wall of the rotor being proximal to the inner wall of the stator;

providing a plurality of fluid outlets, each of the fluid outlets being coupled to a corresponding one of the collider chambers;

introducing a fluid into a space between the inner wall of the stator and the outer wall of the rotor;

rotating the rotor within the stator to generate a rotational flow of the fluid in each of the collider chambers, wherein the rotational flow of the fluid in each of the collider chambers causes the temperature of at least portion of the fluid contained within each collider chamber to increase; and

directing at least a portion of the fluid contained with each collider chamber to its corresponding fluid outlet.

70. (New) A method according to claim 69, wherein the rotational flow of the fluid in each of the collider chambers causes at least a portion of the fluid contained in each collider chamber to become vaporized and wherein at least a portion of the vaporized fluid is directed to its corresponding fluid outlet.